

New Modified Regulations for Environmental Zones

International Diesel Retrofit Advisory
Committee

Pasadena Hilton
February 6, 2002

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General

- Applicable for Heavy Duty Vehicles,
Powered by a Diesel Engine, GVW more
than 3 500 kg.
- Introduced for the first time 1996 in the three
largest cities in Sweden
- Basic Requirements
 - Not more than 8 years old

Exemptions

- Older Vehicles (8 years) if Equipped with Approved After-treatment Device
- Change of Engine
- "Vehicles with Special Body"
- Low Emitting Vehicles (Euro IV,V,EEV)

Requirements

- Three Levels of Emission Reductions
 - A (not more applicable)
 - B (Particulates and Hydrocarbons by **80 %**)
- **From January 1, 2002**
 - C (Oxides of Nitrogen by **35 %**)
- Noise: "No Increase"

"Years in the Zone"

- A New Vehicle 8 years
- + Filter + DOC + 4 years
- + NO_x – Reduction + 2 years
 - EGR – system
 - DeNO_x – systems
 - SCR - system

Approval Procedure

- Type Approval of Device
- Installation on the Vehicle
- Control of Installation
- Issuance of Certificate
(so far 3 700 issued)
- Sticker on the Windshield

System for Type Approval

- Manufacturer: Application Documents
- MTC: Confirmatory Testing
 - "Worst case" Scenario
 - Transient Test Method
 - Approval of Device

Transient Test Cycle

- Name: Braunschweig City Driving Cycle
- Duration: 1 740 seconds (29 minutes)
- Average Speed: 22.9 km/h
- Maximum Speed: 58.2 km/h
- Idle Periods: about 22 %
- Driving Distance: about 11 km

Transient Test Cycle

Braunschweig Cycle

To Consider at Type Approval (NO_x –Reduction)

- Engine Manufacturer (Technology)
- Type/size of Engine
- Engine Power
- Emission Level
- Production Year
- "Working Together with Installed Filter"